Cholesterol Oxidase (CO)

Catalog Number	LDG0025RG
Package	Customized package

For full product information, images and publications, please visit our website.

Overview

Description

Cholesterol oxidase (CO) is a bacterial enzyme that catalyzes the oxidation of cholesterol to cholest-4-en-3-one, producing hydrogen peroxide as a byproduct. This enzyme is widely used in clinical diagnostics for measuring cholesterol levels in blood samples, as it plays a crucial role in cholesterol metabolism. Additionally, cholesterol oxidase is used in research to study cholesterol biosynthesis, and in the biotechnology industry for the production of steroids and as a biocatalyst in biosensors. It is primarily sourced from species such as Streptomyces and Brevibacterium.

Specifications

Expression system

Escherichia coli

Activity

≥40 U/mg

Unit Definition

One unit causes the formation of one micromole of hydrogen peroxide (half a micromole of quinoneimine dye) per minute under the conditions detailed below. (87 mM Potassim phosphate buffer, 0.89 mM Cholesterol, 1.4 mM 4-Aminoantipyrine, 21 mM Phenol, 0.34 % Triton X-100, 64 mM Sodium cholate, 33 µg/ mL BSA, 5 U/ mL Peroxidase)

Form

Lyophilized (Yellow amorphous powder)

Instruction

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Reconstitution

It is recommended to weight 10 mg of lyophilized powder, reconstitute in 1 mL double-distilled water directly, and incubate the solution for at least 10 mins to ensure sufficient re-dissolved.

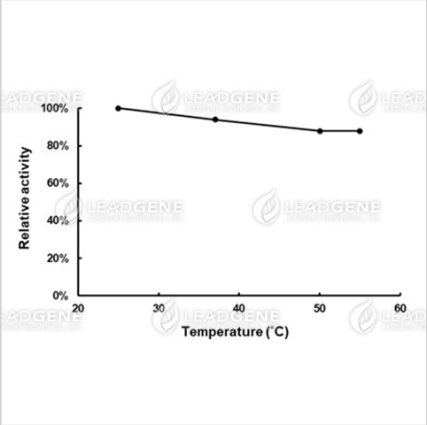
Stability & Storage

This product is stable at -20°C for long-term storage under sterile conditions.
Avoid repeated free-thaw cycles.

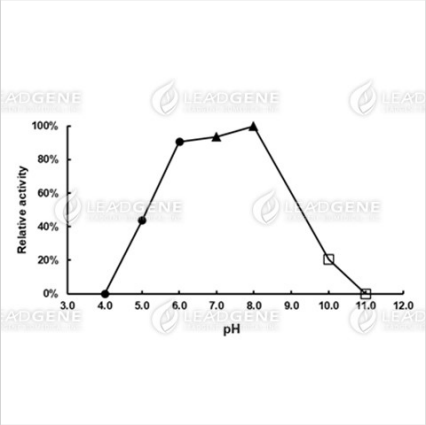
Shipping

The product is shipped with polar packs. Upon receipt, store it immediately at -20°C or lower for long term storage.

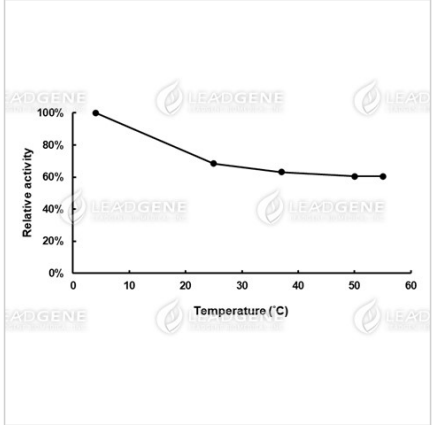
Image



Temperature activity of Cholesterol oxidase.
The enzyme reactions in 0.1 M Potassium phosphate buffer, pH 7.0, were carried out under different temperature



pH activity of Cholesterol oxidase.
The buffer conditions with various pH values were used in the reaction at 37°C. pH 4.0-6.0, 0.1 M Sodium citrate buffer; pH 7.0-8.0, 0.1 M Potassium phosphate buffer; pH 10.0-11.0, 0.1 M Carbonate-bicarbonate buffer.



Thermal stability of Cholesterol oxidase.
The enzyme powder was reconstituted by double-distilled water and treated with different temperature for 15 minutes. Final concentration: 4.3 U/mL.

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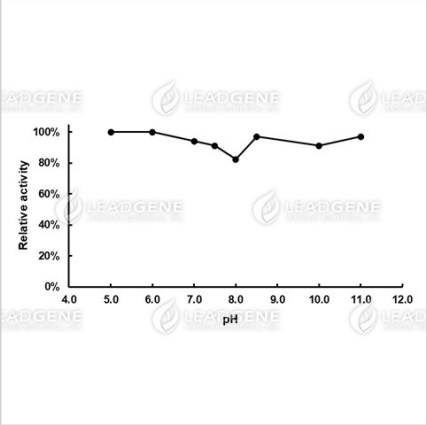

pH stability of Cholesterol oxidase. The enzyme powder was reconstituted by double-distilled water and treated with different pH buffer condition for 20 hours. pH 4.0-6.0, 0.1 M Sodium citrate buffer; pH 7.0-8.0, 0.1 M Potassium phosphate buffer; pH 8.5, 0.1 M Tris-HCl buffer; pH 10.0-11.0, 0.1 M Carbonate-bicarbonate buffer.

Disclaimer : For Research Use or Further Manufacturing Only.

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